Release notes for ENDF/B Development n-034_Se_079 evaluation

April 26, 2017

- `checkr` Warnings:

  1. A previous error halted parsing of the current section
     MAT=3440, MF= 1, MT=451 (1): Parsing stopped

```
ERROR(S) FOUND IN MAT=3440, MF= 1, MT=451
   SECTION CANNOT BE CHECKED FROM SEQUENCE NUMBER      318 TO     324
```

- `checkr` Errors:

  1. A variable is outside the allowed ENDF range
     MAT=3440, MF= 1, MT=451 (0): Variable range

```
ERROR(S) FOUND IN MAT=3440, MF= 1, MT=451
   MOD =     1 OUT OF RANGE     0 -     0           RECORD NUMBER     318
```

  2. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=3440, MF= 5, MT= 17 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=3440, MF= 5, MT= 17
   SECTION  5/ 17 NOT IN DIRECTORY                 RECORD NUMBER    2458
```

  3. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=3440, MF= 5, MT= 22 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=3440, MF= 5, MT= 22
   SECTION  5/ 22 NOT IN DIRECTORY                 RECORD NUMBER    2479
```

  4. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=3440, MF= 5, MT= 28 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=3440, MF= 5, MT= 28
   SECTION  5/ 28 NOT IN DIRECTORY                 RECORD NUMBER    2608
```

  5. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=3440, MF= 5, MT= 32 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=3440, MF= 5, MT= 32
   SECTION  5/ 32 NOT IN DIRECTORY                 RECORD NUMBER    2674
```

  6. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=3440, MF= 5, MT= 91 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=3440, MF= 5, MT= 91
   SECTION  5/ 91 NOT IN DIRECTORY                 RECORD NUMBER    2710
```

- `psyche` Warnings:

1. Strength function in URR not in agreement with PSYCHE's expectations
   FILE 2 / SECTION 151 / ENERGY = 3.80000E+01. STRENGTH FUNCTION IS 5.79981E-05 / STRENGTH FUNCTION 5.79981E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  3.80000E+01. STRENGTH FUNCTION IS  5.79981E-05
                        STRENGTH FUNCTION 5.79981E-05
                                          LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04
... [1 more lines]
```

2. Strength function in URR not in agreement with PSYCHE's expectations
   FILE 2 / SECTION 151 / ENERGY = 3.80000E+01. STRENGTH FUNCTION IS 5.79981E-05 / STRENGTH FUNCTION 5.79991E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  3.80000E+01. STRENGTH FUNCTION IS  5.79981E-05
                        STRENGTH FUNCTION 5.79991E-05
                                          LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04
```

3. Strength function in URR not in agreement with PSYCHE's expectations
   FILE 2 / SECTION 151 / ENERGY = 3.80000E+01. STRENGTH FUNCTION IS 5.79981E-05 / STRENGTH FUNCTION 5.79994E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  3.80000E+01. STRENGTH FUNCTION IS  5.79981E-05
                        STRENGTH FUNCTION 5.79994E-05
                                          LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04
... [2 more lines]
```

4. Strength function in URR not in agreement with PSYCHE's expectations
   FILE 2 / SECTION 151 / ENERGY = 3.80000E+01. STRENGTH FUNCTION IS 5.79981E-05 / STRENGTH FUNCTION 5.79992E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  3.80000E+01. STRENGTH FUNCTION IS  5.79981E-05
                        STRENGTH FUNCTION 5.79992E-05
                                          LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04
... [2 more lines]
```

5. Strength function in URR not in agreement with PSYCHE's expectations
   FILE 2 / SECTION 151 / ENERGY = 3.80000E+01. STRENGTH FUNCTION IS 5.79981E-05 / STRENGTH FUNCTION 5.79985E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  3.80000E+01. STRENGTH FUNCTION IS  5.79981E-05
```

```
                        STRENGTH FUNCTION 5.79985E-05
                                          LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04
```

6. Strength function in URR not in agreement with PSYCHE's expectations
   FILE 2 / SECTION 151 / ENERGY = 3.80000E+01. STRENGTH FUNCTION IS 5.79981E-05 / STRENGTH FUNCTION 5.80001E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  3.80000E+01. STRENGTH FUNCTION IS  5.79981E-05
                        STRENGTH FUNCTION 5.80001E-05
                                          LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04
... [1 more lines]
```

7. Strength function in URR not in agreement with PSYCHE's expectations
   FILE 2 / SECTION 151 / ENERGY = 3.80000E+01. STRENGTH FUNCTION IS 5.79981E-05 / STRENGTH FUNCTION 5.80013E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  3.80000E+01. STRENGTH FUNCTION IS  5.79981E-05
                        STRENGTH FUNCTION 5.80013E-05
                                          LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04
```

8. Strength function in URR not in agreement with PSYCHE's expectations
   FILE 2 / SECTION 151 / ENERGY = 3.80000E+01. STRENGTH FUNCTION IS 5.79981E-05 / STRENGTH FUNCTION 5.80014E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  3.80000E+01. STRENGTH FUNCTION IS  5.79981E-05
                        STRENGTH FUNCTION 5.80014E-05
                                          LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04
```

9. Strength function in URR not in agreement with PSYCHE's expectations
   FILE 2 / SECTION 151 / ENERGY = 3.80000E+01. STRENGTH FUNCTION IS 5.79981E-05 / STRENGTH FUNCTION 5.80000E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  3.80000E+01. STRENGTH FUNCTION IS  5.79981E-05
                        STRENGTH FUNCTION 5.80000E-05
                                          LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04
```

10. Strength function in URR not in agreement with PSYCHE's expectations
    FILE 2 / SECTION 151 / ENERGY = 3.80000E+01. STRENGTH FUNCTION IS 5.79981E-05 / STRENGTH FUNCTION 5.79993E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  3.80000E+01. STRENGTH FUNCTION IS  5.79981E-05
```

```
                        STRENGTH FUNCTION 5.79993E-05
                                          LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04
... [2 more lines]
```

11. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 3.80000E+01. STRENGTH FUNCTION IS 5.79981E-05 / STRENGTH FUNCTION 5.79997E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  3.80000E+01. STRENGTH FUNCTION IS  5.79981E-05
                        STRENGTH FUNCTION 5.79997E-05
                                          LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04
... [1 more lines]
```

12. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 3.80000E+01. STRENGTH FUNCTION IS 5.79981E-05 / STRENGTH FUNCTION 5.79988E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  3.80000E+01. STRENGTH FUNCTION IS  5.79981E-05
                        STRENGTH FUNCTION 5.79988E-05
                                          LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04
```

13. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 3.80000E+01. STRENGTH FUNCTION IS 5.79981E-05 / STRENGTH FUNCTION 5.79983E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  3.80000E+01. STRENGTH FUNCTION IS  5.79981E-05
                        STRENGTH FUNCTION 5.79983E-05
                                          LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04
```

14. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 3.80000E+01. STRENGTH FUNCTION IS 5.79981E-05 / STRENGTH FUNCTION 5.80012E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  3.80000E+01. STRENGTH FUNCTION IS  5.79981E-05
                        STRENGTH FUNCTION 5.80012E-05
                                          LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04
```

15. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 3.80000E+01. STRENGTH FUNCTION IS 5.79981E-05 / STRENGTH FUNCTION 5.79996E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  3.80000E+01. STRENGTH FUNCTION IS  5.79981E-05
                        STRENGTH FUNCTION 5.79996E-05
                                          LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04
```

16. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 3.80000E+01. STRENGTH FUNCTION IS 5.79981E-05 / STRENGTH FUNCTION 5.79984E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  3.80000E+01. STRENGTH FUNCTION IS  5.79981E-05
                        STRENGTH FUNCTION 5.79984E-05
                                          LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04
```

17. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 3.80000E+01. STRENGTH FUNCTION IS 5.79981E-05 / STRENGTH FUNCTION 5.80019E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  3.80000E+01. STRENGTH FUNCTION IS  5.79981E-05
                        STRENGTH FUNCTION 5.80019E-05
                                          LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04
```

18. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 3.80000E+01. STRENGTH FUNCTION IS 5.79981E-05 / STRENGTH FUNCTION 5.79982E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  3.80000E+01. STRENGTH FUNCTION IS  5.79981E-05
                        STRENGTH FUNCTION 5.79982E-05
                                          LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04
```

19. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 3.80000E+01. STRENGTH FUNCTION IS 5.79990E-05 / STRENGTH FUNCTION 5.79990E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  3.80000E+01. STRENGTH FUNCTION IS  5.79990E-05
                        STRENGTH FUNCTION 5.79990E-05
                                          LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04
... [1 more lines]
```

20. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 3.80000E+01. STRENGTH FUNCTION IS 5.79990E-05 / STRENGTH FUNCTION 5.79982E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  3.80000E+01. STRENGTH FUNCTION IS  5.79990E-05
                        STRENGTH FUNCTION 5.79982E-05
                                          LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04
```

21. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 3.80000E+01. STRENGTH FUNCTION IS 5.79990E-05 / STRENGTH FUNCTION 5.80012E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  3.80000E+01. STRENGTH FUNCTION IS  5.79990E-05
                        STRENGTH FUNCTION 5.80012E-05
                                          LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04
```

22. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 3.80000E+01. STRENGTH FUNCTION IS 5.79990E-05 / STRENGTH FUNCTION 5.79989E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  3.80000E+01. STRENGTH FUNCTION IS  5.79990E-05
                        STRENGTH FUNCTION 5.79989E-05
                                          LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04
... [1 more lines]
```

23. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 3.80000E+01. STRENGTH FUNCTION IS 5.79990E-05 / STRENGTH FUNCTION 5.79992E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  3.80000E+01. STRENGTH FUNCTION IS  5.79990E-05
                        STRENGTH FUNCTION 5.79992E-05
                                          LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04
```

24. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 3.80000E+01. STRENGTH FUNCTION IS 5.79990E-05 / STRENGTH FUNCTION 5.79997E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  3.80000E+01. STRENGTH FUNCTION IS  5.79990E-05
                        STRENGTH FUNCTION 5.79997E-05
                                          LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04
```

25. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 3.80000E+01. STRENGTH FUNCTION IS 5.79990E-05 / STRENGTH FUNCTION 5.79980E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  3.80000E+01. STRENGTH FUNCTION IS  5.79990E-05
                        STRENGTH FUNCTION 5.79980E-05
                                          LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04
```

26. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 3.80000E+01. STRENGTH FUNCTION IS 5.79990E-05 / STRENGTH FUNCTION 5.79986E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  3.80000E+01. STRENGTH FUNCTION IS  5.79990E-05
                        STRENGTH FUNCTION 5.79986E-05
                                          LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04
... [1 more lines]
```

27. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 3.80000E+01. STRENGTH FUNCTION IS 5.79990E-05 / STRENGTH FUNCTION 5.80024E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  3.80000E+01. STRENGTH FUNCTION IS  5.79990E-05
                        STRENGTH FUNCTION 5.80024E-05
                                          LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04
```

28. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 3.80000E+01. STRENGTH FUNCTION IS 5.79990E-05 / STRENGTH FUNCTION 5.79977E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  3.80000E+01. STRENGTH FUNCTION IS  5.79990E-05
                        STRENGTH FUNCTION 5.79977E-05
                                          LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04
```

29. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 3.80000E+01. STRENGTH FUNCTION IS 5.79990E-05 / STRENGTH FUNCTION 5.79981E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  3.80000E+01. STRENGTH FUNCTION IS  5.79990E-05
                        STRENGTH FUNCTION 5.79981E-05
                                          LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04
```

30. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 3.80000E+01. STRENGTH FUNCTION IS 5.79990E-05 / STRENGTH FUNCTION 5.80027E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  3.80000E+01. STRENGTH FUNCTION IS  5.79990E-05
                        STRENGTH FUNCTION 5.80027E-05
                                          LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04
```

31. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 3.80000E+01. STRENGTH FUNCTION IS 5.79990E-05 / STRENGTH FUNCTION 5.79972E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  3.80000E+01. STRENGTH FUNCTION IS  5.79990E-05
                        STRENGTH FUNCTION 5.79972E-05
                                          LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04
```

32. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 3.80000E+01. STRENGTH FUNCTION IS 5.79990E-05 / STRENGTH FUNCTION 5.80011E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  3.80000E+01. STRENGTH FUNCTION IS  5.79990E-05
                        STRENGTH FUNCTION 5.80011E-05
                                          LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04
```

33. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 3.80000E+01. STRENGTH FUNCTION IS 5.79990E-05 / STRENGTH FUNCTION 5.79996E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  3.80000E+01. STRENGTH FUNCTION IS  5.79990E-05
                        STRENGTH FUNCTION 5.79996E-05
                                          LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04
```

34. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 3.80000E+01. STRENGTH FUNCTION IS 5.79990E-05 / STRENGTH FUNCTION 5.80000E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  3.80000E+01. STRENGTH FUNCTION IS  5.79990E-05
                        STRENGTH FUNCTION 5.80000E-05
                                          LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04
```

35. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 3.80000E+01. STRENGTH FUNCTION IS 5.79990E-05 / STRENGTH FUNCTION 5.79984E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  3.80000E+01. STRENGTH FUNCTION IS  5.79990E-05
                        STRENGTH FUNCTION 5.79984E-05
                                          LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04
```

36. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 3.80000E+01. STRENGTH FUNCTION IS 5.79990E-05 / STRENGTH FUNCTION 5.80018E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  3.80000E+01. STRENGTH FUNCTION IS  5.79990E-05
                        STRENGTH FUNCTION 5.80018E-05
                                          LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04
```

37. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 3.80000E+01. STRENGTH FUNCTION IS 5.79990E-05 / STRENGTH FUNCTION 5.80004E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  3.80000E+01. STRENGTH FUNCTION IS  5.79990E-05
                        STRENGTH FUNCTION 5.80004E-05
                                          LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04
... [1 more lines]
```

38. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 3.80000E+01. STRENGTH FUNCTION IS 5.79990E-05 / STRENGTH FUNCTION 5.80014E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  3.80000E+01. STRENGTH FUNCTION IS  5.79990E-05
                        STRENGTH FUNCTION 5.80014E-05
                                          LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04
```

39. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 3.80000E+01. STRENGTH FUNCTION IS 5.79990E-05 / STRENGTH FUNCTION 5.80019E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  3.80000E+01. STRENGTH FUNCTION IS  5.79990E-05
                        STRENGTH FUNCTION 5.80019E-05
                                          LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04
```

40. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 3.80000E+01. STRENGTH FUNCTION IS 5.79990E-05 / STRENGTH FUNCTION 5.79983E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  3.80000E+01. STRENGTH FUNCTION IS  5.79990E-05
                        STRENGTH FUNCTION 5.79983E-05
                                          LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04
```

41. Strength function in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 3.80000E+01. STRENGTH FUNCTION IS 5.79990E-05 / STRENGTH FUNCTION 5.80008E-05 / LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04 (0): URR str. ftn.

```
FILE  2
   SECTION 151
         ENERGY =  3.80000E+01. STRENGTH FUNCTION IS  5.79990E-05
                        STRENGTH FUNCTION 5.80008E-05
                                          LIES OUTSIDE LIMITS 1.00000E-04 TO 9.00000E-04
```

- `recent` Warnings:

1. Fission widths given for non-fissile nucleus, but are zero
0: Fission?

```
 Calculate Cross Sections from Resonance Parameters (RECENT 2015-1)
 ==================================================================================
 Retrieval Criteria-----------        MAT
 File 2 Mimimum Cross Section- 1.0000E-10 (Standard Option)
 Reactions with No Background-     Output (Resonance Contribution)
... [615 more lines]
```

- `fudge-4.0` Warnings:

1. Cross section does not match sum of linked reaction cross sections
crossSectionSum label 0: total (Error # 0): CS Sum.

```
WARNING: Cross section does not match sum of linked reaction cross sections! Max diff: 0.83%
```

2. Cross section does not match sum of linked reaction cross sections
crossSectionSum label 1: (z,n) (Error # 0): CS Sum.

```
WARNING: Cross section does not match sum of linked reaction cross sections! Max diff: 0.11%
```

- `fudge-4.0` Errors:

1. Calculated and tabulated Q values disagree.
reaction label 31: n[multiplicity:'2'] + Se78 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -7011044.371948242 eV vs -6.9652e6 eV!
```

2. Calculated and tabulated Q values disagree.
reaction label 32: n[multiplicity:'3'] + Se77 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -17508855.35614014 eV vs -1.74667e7 eV!
```

3. Energy range of data set does not match cross section range
reaction label 32: n[multiplicity:'3'] + Se77 / Product: n / Distribution: / uncorrelated - energy - XYs2d: (Error # 0): Domain mismatch (a)

```
WARNING: Domain doesn't match the cross section domain: (17689900.0 -> 20000000.0) vs (17690000.0 -> 20000000.0)
```

4. Calculated and tabulated Q values disagree.
   reaction label 33: n + H1 + As78 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -10437365.75285339 eV vs -1.04742e7 eV!
```

5. Calculated and tabulated Q values disagree.
   reaction label 34: n + H2 + As77 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -15184958.76339722 eV vs -1.50645e7 eV!
```

6. Calculated and tabulated Q values disagree.
   reaction label 35: Se80 + gamma (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: 9865439.195571899 eV vs 9912090. eV!
```

7. Calculated and tabulated Q values disagree.
   reaction label 36: n + He4 + Ge75 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -6534302.374649048 eV vs -6486380. eV!
```

8. Calculated and tabulated Q values disagree.
   reaction label 37: H1 + As79_s (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -1546941.827651978 eV vs -1418130. eV!
```

9. Calculated and tabulated Q values disagree.
   reaction label 38: H2 + As78_s (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -8212799.651916504 eV vs -8.1641e6 eV!
```

10. Calculated and tabulated Q values disagree.
    reaction label 39: H3 + As77_s (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -8927725.822784424 eV vs -8879360. eV!
```

11. Calculated and tabulated Q values disagree.
    reaction label 40: He3 + Ge77_s (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -11611682.90689087 eV vs -1.15621e7 eV!
```

12. Calculated and tabulated Q values disagree.
    reaction label 41: He4 + Ge76_s (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: 2893634.601394653 eV vs 2947120. eV!
```

- `njoy2012` Warnings:

1. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
   groupr...compute self-shielded group-averaged cross-sections (0): GROUPR/conver (0)

```
---message from conver---cannot do complete particle production for mt= 16
                         only mf4/mf5 provided
```

2. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
   groupr...compute self-shielded group-averaged cross-sections (1): GROUPR/conver (0)

```
---message from conver---cannot do complete particle production for mt= 17
                         only mf4/mf5 provided
```

3. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
   groupr...compute self-shielded group-averaged cross-sections (2): GROUPR/conver (0)

```
---message from conver---cannot do complete particle production for mt= 22
                         only mf4/mf5 provided
```

4. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
   groupr...compute self-shielded group-averaged cross-sections (3): GROUPR/conver (0)

```
---message from conver---cannot do complete particle production for mt= 28
                         only mf4/mf5 provided
```

5. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
   groupr...compute self-shielded group-averaged cross-sections (4): GROUPR/conver (0)

```
---message from conver---cannot do complete particle production for mt= 32
                         only mf4/mf5 provided
```

6. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
   groupr...compute self-shielded group-averaged cross-sections (5): GROUPR/conver (0)

```
---message from conver---cannot do complete particle production for mt= 91
                         only mf4/mf5 provided
```